Claims

The claims are amended as follows:

1.   (Currently Amended) A computer-implemented method, comprising:

storing a list of physical resource objects;

storing a list of virtual resource objects;

storing a list of parent and child objects;

creating a tree of relationships of the parent and child objects to the physical and virtual resource objects, wherein a child object of a parent object represents a resource consumer of a resource producer associated with the parent object; and

determining a net availability of the resource producer associated with the parent object by traversing the tree of relationships and by-retrieving consumption information included in each child object of the tree of relationships to calculate the net availability of the resource producer.

2.   (Original) The method of claim 1, wherein storing a list of virtual resource objects includes storing an object representing system memory bandwidth.

3.   (Original) The method of claim 2, wherein storing a list of child objects includes storing an object representing a functional unit that consumes bandwidth.

4.   (Original) The method of claim 3, wherein storing an object representing a functional unit that consumes bandwidth includes storing an indication of the amount of bandwidth consumed.

5.   (Original) The method of claim 4, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents an overlay unit.

6.   (Original) The method of claim 4, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a cursor unit.

7.   (Original) The method of claim 4, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a display output unit.

8.   (Previously Presented) The method of claim 1, wherein a root of the tree represents a physical resource object.

9.   (Previously Presented) The method of claim 1, wherein storing a list of child objects includes storing an object representing a functional unit that consumes bandwidth.

10.   (Original) The method of claim 9, wherein storing an object representing a functional unit that consumes bandwidth includes storing an indication of the amount of bandwidth consumed.

11.   (Original) The method of claim 10, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents an overlay unit.

12.   (Original) The method of claim 10, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a cursor unit.

13.   (Original) The method of claim 10, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a display output unit.

14.   (Currently Amended) A method, comprising:
         maintaining a record of available resources;
         maintaining a record of consumed resources;
         tracking a relationship among resource producers and consumers in a tree data structure, a root of the tree data structure to represent a physical device that consumes the available resources, wherein a resource consumer represents a child node of a parent node associated with a resource producer;
         determining a net availability of the resource producer associated with the parent node by traversing the tree data structure and by-retrieving consumption information included in each child node of the tree data structure to calculate the net availability of the resource producer; and

updating the records of available and consumed resources upon a change in relationship among resource producers and resource consumers.

15.　(Previously Presented) The method of claim 14, wherein tracking relationships among resource producers and resource consumers includes tracking a relationship between a system memory bandwidth producer and a system memory bandwidth consumer.

16.　(Previously Presented) The method of claim 14, wherein tracking relationships among resource producers and resource consumers includes tracking a relationship between a graphics local memory bandwidth producer and a graphics local memory consumer.

17.　(Currently Amended) A machine-readable medium having stored thereon instructions which, when executed by a computer system, causes the computer system to perform a method comprising:

storing a list of physical resource objects;

storing a list of virtual resource objects;

storing a list of parent and child objects;

creating a tree of relationships of the parent and child objects to the physical and virtual resource objects, wherein a child object of a parent object represents a resource consumer of a resource producer associated with the parent object; and

determining a net availability of the resource producer associated with the parent object by traversing the tree of relationships and by retrieving consumption information included in each child object of the tree of relationships to calculate the net availability of the resource producer.

18.　(Original) The machine-readable medium of claim 17, wherein storing a list of virtual resource objects includes storing an object representing system memory bandwidth.

19.　(Original) The machine-readable medium of claim 18, wherein storing a list of child objects includes storing an object representing a functional unit that consumes bandwidth.

20.   (Original) The machine-readable medium of claim 19, wherein storing an object representing a functional unit that consumes bandwidth includes storing an indication of the amount of bandwidth consumed.

21.   (Original) The machine-readable medium of claim 20, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents an overlay unit.

22.   (Original) The machine-readable medium of claim 20, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a cursor unit.

23.   (Original) The machine-readable medium of claim 20, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a display output unit.

24.   (Original) The machine-readable medium of claim 17, wherein storing a list of virtual resource objects includes storing an object representing local graphics memory bandwidth.

25.   (Original) The machine-readable medium of claim 24, wherein storing a list of child objects includes storing an object representing a functional unit that consumes bandwidth.

26.   (Previously Presented) The machine-readable medium of claim 17, wherein a root of the tree represents a physical resource object.

27.   (Original) The machine-readable medium of claim 26, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents an overlay unit.

28.   (Original) The machine-readable medium of claim 26, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a cursor unit.

29.   (Original) The machine-readable medium of claim 26, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a display output unit.

30.   (Currently Amended) A machine-readable medium having stored thereon instructions which, when executed by a computer system, causes the computer system to perform a method comprising:

maintaining a record of available resources;

maintaining a record of consumed resources;

tracking relationships among resource producers and resource consumers in a tree data structure, a root of the tree data structure to represent a physical device that consumes the available resources, wherein a resource consumer represents a child node of a parent node associated with a resource producer;

determining a net availability of the resource producer associated with the parent node by traversing the tree data structure and by retrieving consumption information included in each child node of the tree data structure to calculate the net availability of the resource producer; and

updating record of available and consumed resources upon a change in relationship among resource producers and resource consumers.

31.   (Previously Presented) The machine-readable medium of claim 30, wherein tracking relationships among resource producers and resource consumers includes tracking a relationship between a system memory bandwidth producer and a system memory bandwidth consumer.

32.   (Previously Presented) The machine-readable medium of claim 31, wherein tracking relationships among resource producers and resource consumers includes tracking a relationship between a graphics local memory bandwidth producer and a graphics local memory consumer.